



REYNOLDS

ARCHITECTURAL
ALUMINUM

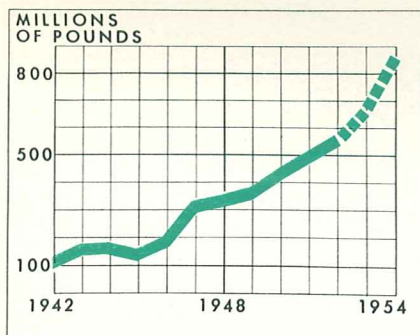
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1954

REYNOLDS ALUMINUM



Expanding primary aluminum production of Reynolds Metals Company . . . a historic chapter in the company's 34 years of continuing growth.

The Reynolds Metals Company, for many years the world's largest producer of aluminum foil, became a primary aluminum producer in 1940. They were certain that the advantages of aluminum would increase demand and warrant competition in the industry.

Today, Reynolds capacity is more than double the total prewar production in America. In addition, they now have extensive bauxite (aluminum ore) mining operations, and facilities for producing a complete line of aluminum mill products.

This growth required not only faith in aluminum but intensive and imaginative market development. And the development of architectural aluminum applications is one of Reynolds major objectives.

MINING

Mines in Arkansas and Jamaica



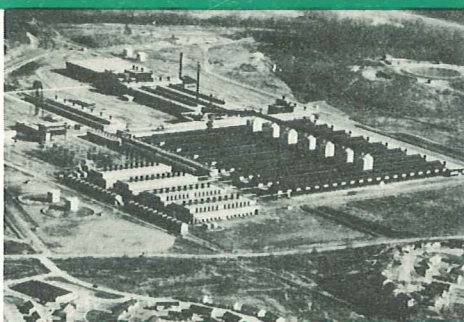
REFINING

Plant in Arkansas



REDUCTION

(Casting alloys and extrusion billets)
Plants in Arkansas, Oregon, Texas and Washington.



POWDERS & PASTES

Plant in Kentucky



SHEET & PLATE

Plants in Alabama and Illinois



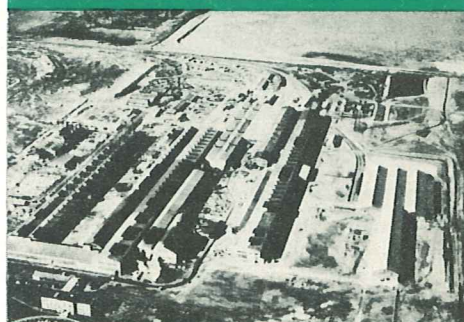
FOIL

Plants in Alabama, Kentucky and Virginia



WIRE, ROD, BAR & STRUCTURALS

Plant in Alabama



EXTRUSIONS, PIPE & TUBING

Plants in Arizona and Michigan





modern design has Aluminum in mind

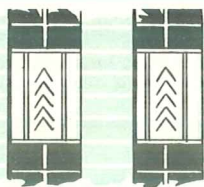
Design Approach

No other architectural metal does as much, at as low a cost, as aluminum. The aluminum applications described in this brochure show only what has become more and less standard. Rather than limiting your design approach they could well serve to stimulate it. Distinctive aluminum designs can be achieved on an economical basis . . . often at a lower cost than with non-permanent metals . . . less costly than with other white and non-ferrous metals. So be sure to consider these architectural advantages of aluminum . . .



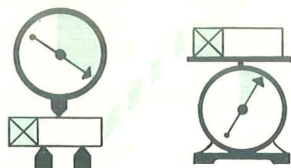
MODERN APPEARANCE

The natural silver-grey of aluminum is an attractive color in itself. For special effects the natural tone can be varied from lustrous satin to mirror brightness and finished in colors ranging from iridescent pastels to vivid deep tones.



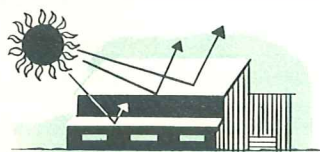
NON-STAINING

Because aluminum is corrosion resistant and not subject to the ravages of rust, it will not streak and stain adjacent surfaces. Also, clear, permanent anodic films are easily applied to protect special finishes and eliminate daily polishing.



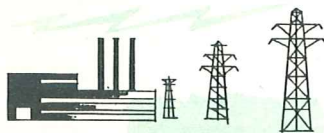
HIGH STRENGTH-WEIGHT RATIO

Aluminum weighs only 1/3 as much as other commonly used metals, but some of the newer alloys have strengths considerably greater than those of structural steel. Light weight means lower costs because of ease of handling in fabrication and erection.



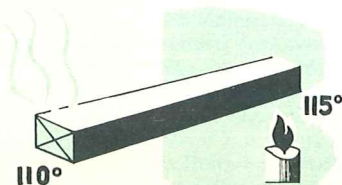
EXCELLENT REFLECTIVITY

Aluminum reflects up to 85% of radiant heat and light rays. This makes it ideal for insulation and efficient lighting. For lighting applications the surface can be polished for intense reflection or etched for diffused dispersion.



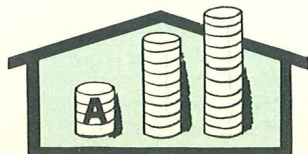
HIGH ELECTRICAL CONDUCTIVITY

Pound for pound aluminum has the highest electrical conductivity of the common metals—212.9% that of copper. Volume for volume hard drawn aluminum wire has 61% of the conductivity of copper. Like other non-ferrous metals it is non-magnetic.



HIGH THERMAL CONDUCTIVITY

The heat conducting ability of aluminum is important in specialized applications like heat transfer units and food and chemical processing equipment. Its non-toxic and chemical resistant qualities are also important in the latter applications, as is its non-sparking characteristic with explosive chemicals.



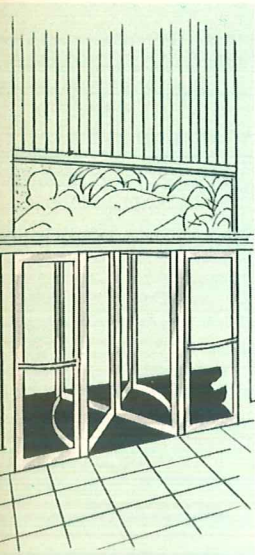
LOW COST

The true cost of aluminum is its cost in the finished job. It provides three times as much material per pound as the other construction metals . . . there's less weight to ship and handle . . . fabricating and erecting costs are usually lower . . . protective coatings are usually eliminated.



REYNOLDS ALUMINUM

Standard designs of some of the applications described here are made by several reputable manufacturers. We will be pleased to send you their names. Also the names of reliable fabricators for your special designs.



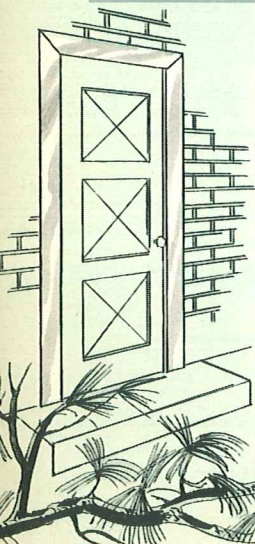
DOORS

Aluminum doors, both exterior and interior, provide the maximum in appearance, utility and durability. Standard designs for commercial and institutional application are available for all types of operation—revolving, hinged, swinging, sliding, etc. A majority of these standard designs make use of the lightweight strength, natural attractiveness and low cost of aluminum extrusions. Aluminum extrusions also make it easy to design special themes, to help carry out overall design themes. (See "Designing with Aluminum Extrusions", one of the Reynolds handbooks listed on page 15). The wide variety of standard aluminum hardware now available is a further encouragement to designing doors in aluminum.



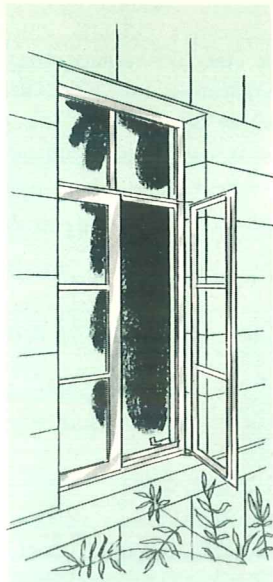
COMBINATION DOORS

Adverse climatic conditions and weathering have no effect on rustfree, rotproof aluminum combination storm-screen doors. These durable, always attractive aluminum doors fit right in with increasingly popular aluminum storm windows and screens—are a highly visible mark of quality planning and construction in modern homes. In addition to providing longer life and absolutely minimum maintenance, these combination doors let homeowners make fast interchanges of complete screen and storm panels. Screened, half-panel ventilation in winter is also possible with most designs. There are many excellent makes of combination doors from which to choose and they are approved for FHA financing.



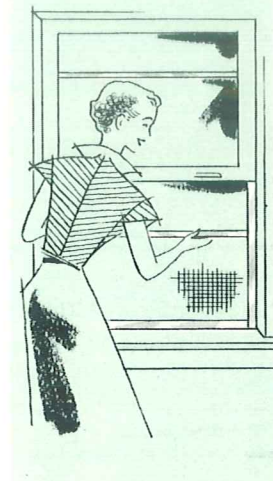
DOOR & WINDOW FRAMES

For genuinely easy maintenance, aluminum door and window frames in one of the many natural finishes are the logical specification. They harmonize with any color scheme and completely eliminate the need for painting or repainting. This added attractiveness and lower maintenance makes aluminum the first choice of quality minded designers in both heavy and light construction. Aluminum also offers the usual advantages of metal trim. It is fireproof. It eliminates joint gaps and assures true alignment for permanently snug fits with sash and doors. Aluminum frames can be fabricated with standard woodworking hand tools and installed costs are comparable to those for other durable materials.



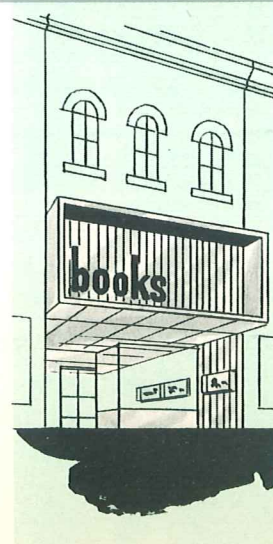
WINDOWS

Aluminum has clearly proved its superiority for all types of windows—awning, casement, double hung, picture, sliding and special designs, including skylights. That's why they are now specified for most quality homes, commercial and industrial buildings. Aluminum windows are light to handle and install, assure trouble-free operation, retain original weather-tightness, do not rust or stain, eliminate painting and reduce maintenance. Aluminum extruded shapes, roll-formed shapes, die castings or combinations of them are all used successfully when both the shapes and windows are correctly designed. Many makes also extend the advantages of aluminum to matching screens and storm windows.



STORM WINDOWS & SCREENS

Whether they are used separately or in combination, aluminum storm windows and screens are enjoying a steady increase in popularity in all parts of the country. The reason is aluminum's advantages of light weight for easy installation, permanent fit with no swelling and shrinking problems, resistance to rust and corrosion, attractive appearance and minimum maintenance. You can specify these advantages with many standard makes of combination aluminum screens and storm windows. Or, select one of the roll-up and tension aluminum screens that are especially popular in warmer parts of the country where storm windows are not required. Both insure your clients a sound investment for a lifetime of usefulness.

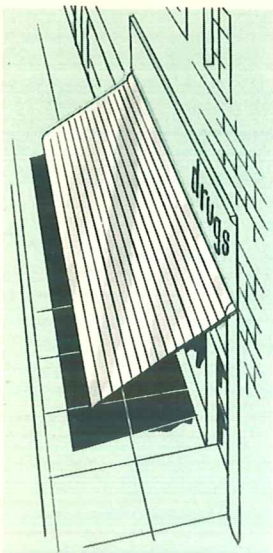


STORE FRONTS

The trim neatness of aluminum in modern store fronts has been fully demonstrated. It blends well with other materials. It doesn't streak and stain adjoining surfaces. And it will stay bright indefinitely if the pores are sealed against dirt either with a permanent anodic finish, an occasional coat of clear lacquer or an application of wax when the glass is washed. Extruded and roll-formed aluminum shapes for structurals and trim, and aluminum fasteners are available through store front fabricators for most requirements, as a part of their complete installation service. Special shapes are easily and inexpensively extruded. (See "Designing with Aluminum Extrusions", one of the Reynolds handbooks listed on page 15).

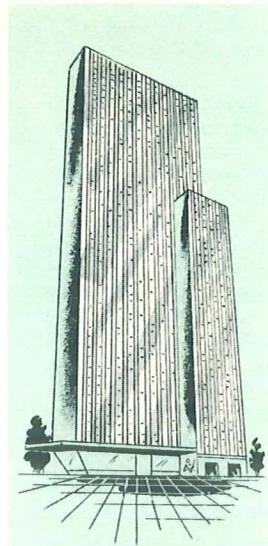


modern design has Aluminum in mind



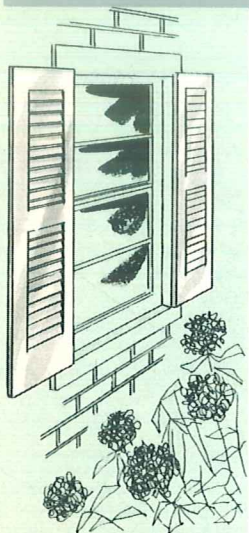
AWNINGS

The rapidly increasing use of aluminum awnings is due to their advantages in all types of structures—institutional, commercial, industrial and residential. Besides providing desired shading, aluminum awnings reflect sun's heat—do not trap and hold it against the building. Once up, aluminum awnings need never be taken down or stored because maintenance is not a problem with rotproof, fireproof, rustproof, permanent aluminum. Light weight keeps added structural load to a minimum. Aluminum awnings are available either in natural finish or in an unlimited number of color combinations. Fixed, collapsible and concealed awnings made from Reynolds Aluminum are sold by many reliable manufacturers.



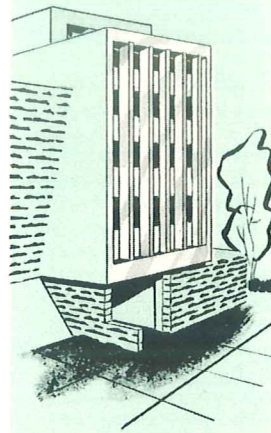
SPANDRELS & SKINS

Corrosion-resistant aluminum spandrels and skins will still be attractive after years of service—will not streak and mar adjoining surfaces. They are light, easy to handle and erect, and there is a choice of fabricating methods. *Cast* aluminum affords wide design flexibility, with ornamentation, reinforcement and mounting lugs in one unit. *Extruded* aluminum sections may be assembled in varying widths and heights. (See "Designing with Aluminum Extrusions", listed on page 15.) *Sheet* panels can be stamped with special designs or made from standard embossed sheet. Combinations of the basic types are also possible. For example, an extrusion might frame and at the same time reinforce a sheet panel.



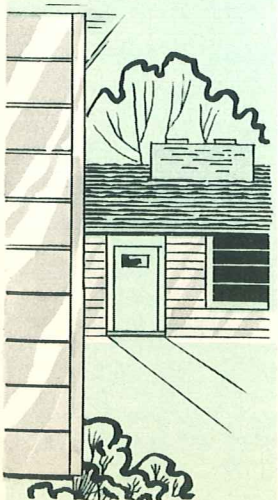
SHUTTERS

Aluminum shutters offer the decorative beauty and functional qualities of wood and other metal shutters but have none of their disadvantages. Rotting, warping, splitting and rusting are all eliminated because aluminum shutters are not affected by adverse weather and climatic conditions. In addition, they can be permanently finished in various attractive natural aluminum tones that do not require painting or repainting. Or, if desired, aluminum shutters can be painted to match specific color schemes. Whether they are used primarily for functional purposes, such as hurricane protection, or simply for decoration, shutters made of aluminum offer a lifetime of usefulness at a moderate cost.



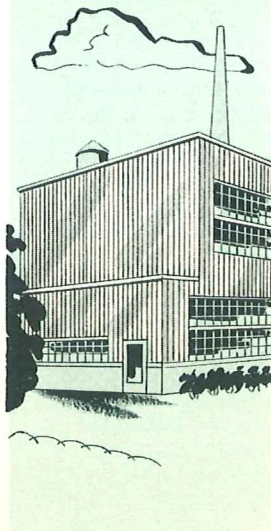
SOLAR SHADING

Advantages of aluminum for spandrels and skins apply equally to fin facings. Light weight for minimum load and easy handling of large sections—choice of cast, extruded or sheet designs—corrosion resistance and freedom from destructive rust—a wide range of durable, decorative finishes. (See "Finishes for Aluminum", a Reynolds handbook listed on page 15) all make aluminum the material of first consideration for facings. The ability of aluminum to reflect up to 85% of radiant heat cuts heating and cooling system requirements, and the cost of operating and maintaining them. Call in a Reynolds Architect Service Representative for assistance on wall facing and other design problems.



RESIDENTIAL SIDING

More and more aluminum siding is being specified for modern homes thanks to the many outstanding features that aluminum offers. You can choose from a number of siding types to fit your design ideas—lap siding in panels or individual strips and special ribbed designs for a board and batten effect . . . some with baked on finish, others plain or stipple embossed for finishing as desired. There is no rotting, warping, shrinking, swelling or cracking with aluminum siding. It is also fire, rodent and termite resistant, serves as a vapor barrier and provides natural insulation. Aluminum siding is light, easily handled, can be worked with standard carpenter tools and ease of installation cuts construction costs.



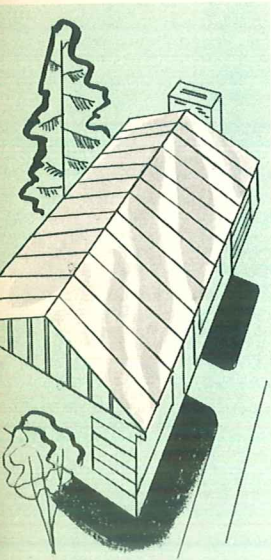
CURTAIN WALLS

The five essentials of curtain wall design are all provided by the properties of aluminum. *Strong, lightweight* aluminum assures minimum structural loads and easy handling of large sections. *Individual expression* is provided by the widest choice of finishes and by fabricating flexibility. (See Spandrels and Skins.) Exterior facings of aluminum reflect the sun's heat to cut air cooling requirements in summer. By the same principle, aluminum interior facings lower winter heating costs. Consequently, bulk *insulation* is held to a minimum. And positive *rust resistance* assures building permanence and appearance. Specify these aluminum advantages in standard curtain walls as well as in your own designs.



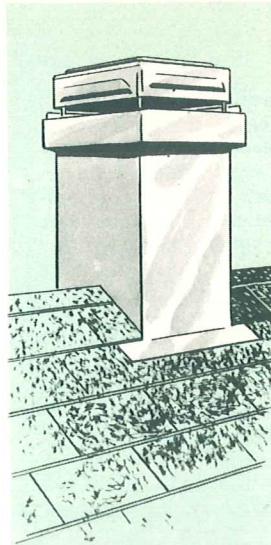
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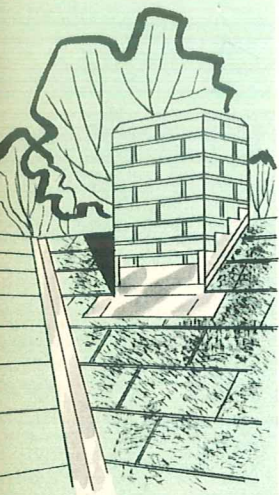
ROOFING

The advantages of Standing and Batten Seam roofs have long been recognized. When made of aluminum, lasting quality at an exceptionally reasonable cost is added to their virtues. Now, attractive shingle designs are available as panels and individual units to bring the same advantages to homes. For industrial and farm structures, corrugated aluminum roofing and siding or one of the other specialized designs often is the answer to low cost construction. Heat reflecting aluminum reduces under-roof summer temperatures. Lighter weight minimizes roof loads and reduces installation time. Aluminum also provides fire resistance and eliminates rusting, rotting, chipping and curling problems.



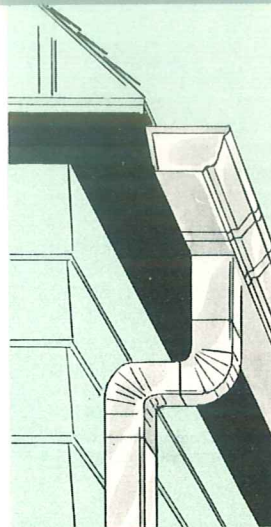
CHIMNEYS

Predesigned aluminum chimneys, a comparatively recent innovation in residential construction, improve efficiency while decreasing costs. A joist supported platform replaces the masonry footing. No clearance is needed at floors, ceilings or roof, consequently, less space is required. For gas fired installations the flue consists of concentric aluminum walls separated by bulk insulation. With other fuels, lightweight, insulating concrete sections are slipped over a sealed-joint tile liner. Conventional exterior appearance is achieved with an aluminum housing, flashing and cap. Heat reflection, corrosion resistance and lightweight are the obvious advantages of aluminum in these chimneys which are UL approved.



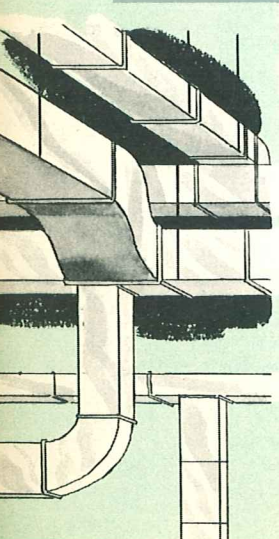
FLASHING

You can specify permanently rustproof aluminum flashing for clients with the most modest building budgets. While aluminum provides the lasting protection of more expensive non-ferrous metals, the installed cost is comparable to that for greatly inferior compositions and rustable metals that have only a thin veneer of protection. Further, maintenance attention is completely avoided when aluminum flashing is properly applied. Painting is not necessary and adjoining surfaces of the building are never blemished by red stains. Aluminum is also fire resistant and is easy to handle in construction. For all these reasons, first low cost is the total cost with long lasting aluminum flashing.



GUTTERS & DOWNSPOUTS

Wood-rot, red-rust and green-corrosion are all problems of the past with gutters and downspouts made of aluminum. In weathering, aluminum becomes a pleasing silver-grey that blends with any color combination. This attractive appearance is retained year after year, without the necessity of protective painting. Installation costs for aluminum gutters are low, too, because trough sections are slip-connected as easily and securely as the downspouts and fittings. Standard sizes and styles of aluminum gutters and downspouts, with all the necessary accessories, are available for most light and heavy construction needs. Special designs can be fabricated easily with conventional metal working equipment.



DUCTWORK

Bringing otherwise modern commercial buildings up to date with air conditioning often is possible only by specifying aluminum for ductwork. At $\frac{1}{3}$ the weight of most other metals, aluminum can cut tons from added weight to keep installations within structural load limits. Other advantages apply equally to small homes and large buildings. Aluminum is more attractive in game rooms and other exposed installations. It won't rust from condensation in air cooling systems because aluminum gives solid protection, not just a thin veneer that cracks in fabrication. It is a natural insulator . . . offers resistance to industrial fumes . . . is non-sparking and therefore ideal in explosive atmospheres.



INSULATION

Aluminum foil bonded to tough kraft paper is the most modern concept of insulation without bulk. However, combinations of aluminum foil with other insulating materials are also available for the ultimate in insulating efficiency. The aluminum surface alone reflects radiant heat to cut losses through walls and ceilings 50%, through ground floors 64%, and to reduce under-roof summer temperature up to 15°. This efficient reflective ability is retained in spite of dust or oxidation. Aluminum reflective insulation is a perfect vapor barrier. It is also non-absorptive, clean, odorless, fire and vermin resistant. It comes in long rolls, is easily applied and is about half the cost of other types.

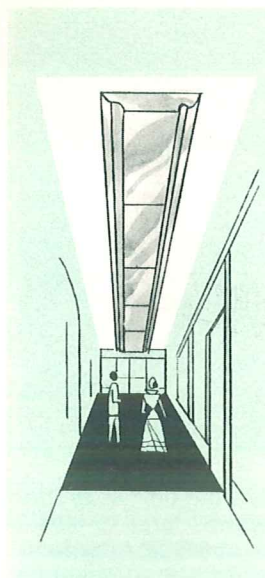


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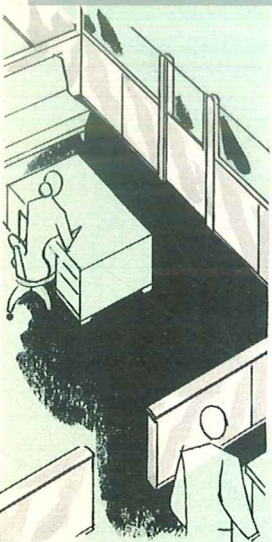
CEILING

Although suspended ceilings are not new, recent developments make aluminum suspended ceilings a matter of first consideration. In a typical installation, inverted aluminum tees are suspended with aluminum wire, and perforated aluminum panels with decorative designs are just laid in place on the tees. Sound passes through the perforations and is absorbed by insulation blankets. With ductwork concealed above, the insulation is applied to all solid surfaces and the perforated panels provide uniform distribution of conditioned air. Utilities located in the same free area are accessible at every point by simply raising the panels. Here, then, is another means to low-cost construction and modernization.



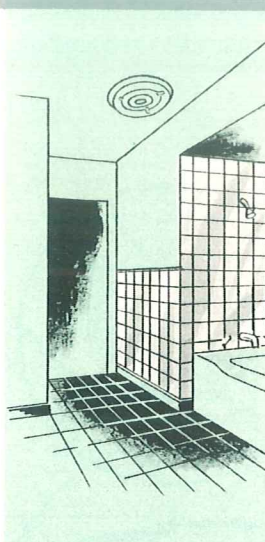
LIGHTING

Consider aluminum's high reflection efficiency (80-85%) and natural beauty which make it an ideal material for most lighting installations. Its efficiency as a reflector and its pleasing color are permanent and not impaired by time, chipping or cleaning. Aluminum polishes to mirror brightness for highlighting or it can be etched for soft diffusion and indirect lighting. Special units may be designed with aluminum sheet or extruded sections as the concealing troughs for all types of illumination. For industrial or commercial installations specify factory assembled aluminum units from the many louvered, open and troffer types of luminaires available from leading lighting equipment manufacturers.



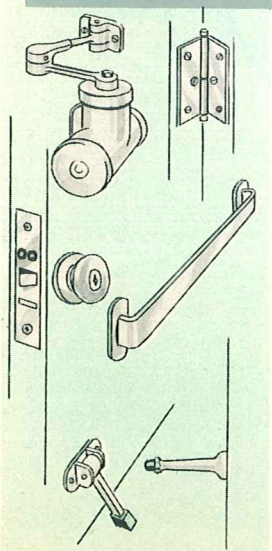
PARTITIONS

To reduce floor loads of fixed installations and for ease in shifting movable partitions, aluminum is the ideal, lightweight construction material. Rectangular aluminum tubing for framing members can double as wiring conduit. Organic finished or embossed aluminum sheet facing helps keep weight at a minimum and provides acoustical benefits when perforated and used as described for Ceilings. Railing height partitions and the base of glass-topped cages are capped with extruded aluminum shapes. Extrusions are also used for corners, panel seams, glass retainers and base mouldings, as well as to lock full height, movable partitions in place. Obviously, many design variations are possible.



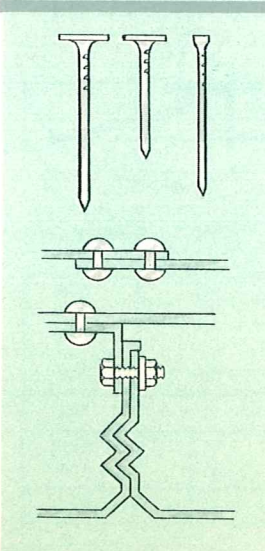
WALL TILE

Like other aluminum building products, aluminum wall tile offers a number of exceptional advantages. For example, aluminum wall tile is light in weight—an important factor in overcoming the possibility of material pulling away from the wall. Aluminum will never rust—a distinct advantage in combating moisture problems in such places as bathrooms and locker rooms. Like most tile, aluminum tile is easy to clean and therefore ideal in kitchens. The low cost, lasting beauty, rugged durability and ease of installing aluminum tile are still more reasons why it is so popular. Aluminum wall tile is available in a wide range of colors, shapes and sizes from leading manufacturers.



HARDWARE

Aluminum hardware completes the white metal theme in modern design—adds an inexpensive touch of quality that makes a good first impression as well as a pleasing, lasting impression. Like other aluminum trim, the lustrous natural color of aluminum hardware, in a wide range of finishes, harmonizes with all decorative schemes. It is equally attractive in homes, commercial buildings, institutions—all types of architecture. Aluminum hardware won't rust or corrode—stays attractive. You can specify from a full line including closers, escutcheons, knobs, strike plates, push bars, kick plates, hinges, stops and many other commonly used aluminum hardware items made by leading manufacturers.



FASTENERS

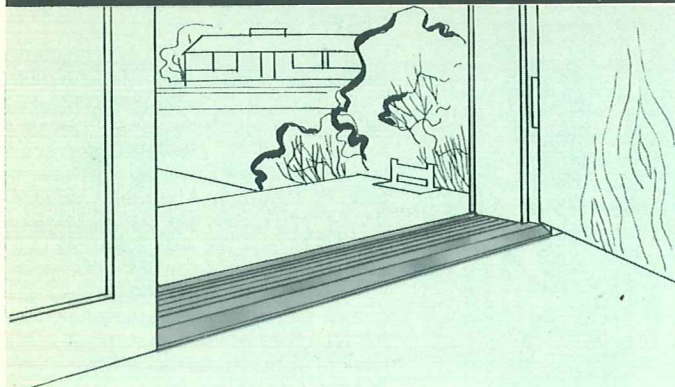
It is always advisable to use aluminum fasteners for mechanically joining or mounting aluminum members. If dissimilar metal fasteners are used, surfaces in contact with aluminum usually are coated with zinc chromate as a precaution against galvanic corrosion. Aluminum fasteners also are a logical choice with non-metallic materials. For example, wood siding will never become rust-streaked if aluminum nails are specified. A wide variety of aluminum fasteners—bolts, nuts, screws, rivets, pins, nails, etc.—can be obtained in countless standard and special types and sizes from leading fastener manufacturers. (See "Mechanical Fastening Methods for Aluminum" listed on page 15).



REYNOLDS ALUMINUM

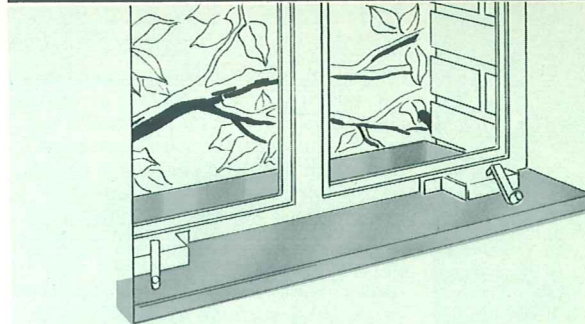
Reynolds supplies only the aluminum mill products for these applications. We will be pleased to send you the names of fabricators who can perform metal work to your specifications.

THRESHOLDS

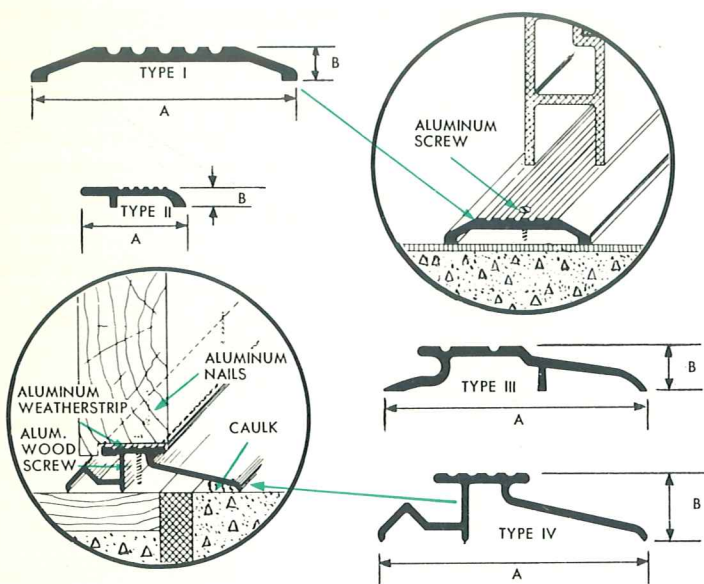


Always bright aluminum thresholds are the first assurance of quality design in entering any building—large or small. Yet they are economical in first cost and maintenance—lowest in cost of the non-rusting metals. Enduring aluminum thresholds assure a permanently snug relationship to doors, and the variety of Reynolds designs provides a type for every entrance or between rooms application—including pivot door installations.

SILLS AND STOOLS

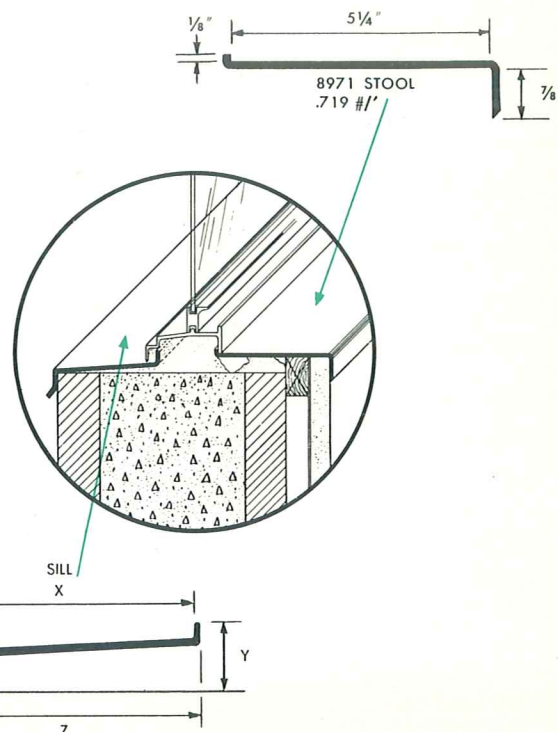


Durable, extruded aluminum sills and stools are designed to take hard wear and to eliminate rusting, rotting and painting maintenance. Reynolds extruded sills are thin enough to extend into masonry joints but may also be cut to width and caulked for water tightness where they meet jambs. An initial, lifelong finish, keeps aluminum window trim new looking for years and years. It fits right in with modern aluminum windows.



Type	Section No.	"A" Inches	"B" Inches	Approx. Wt. #/'
I	3650	3	1/2	.658
	3651	4	1/2	.787
	3662	5	1/2	1.002
	3663	6	1/2	1.189
	7883	7 1/2	1/2	1.769
II	3796	1 3/8	1/4	.184
III	3704	3 1/2	3/8	.577
	3798	4 1/4	3/8	.701
IV	5192	3 1/2	7/8	.649

Thresholds are 63S-T5 aluminum. 16' 3" lengths.



Item	Section No.	"X" Inches	"Y" Inches	"Z" Inches	Approx. Wt. #/'
SILL	3686	4 1/2	1 1/8	4 7/8	.678
	3687	5	1 3/8	5 3/8	.734
	3685	5 1/2	1 3/8	5 7/8	.791

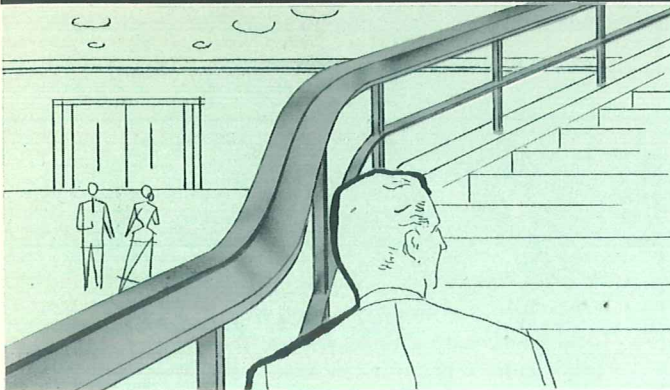
Sills and Stools are 63S-T42 aluminum. 21' lengths.

Items on these pages are warehoused by distributors. Other standard and special designs available on inquiry.



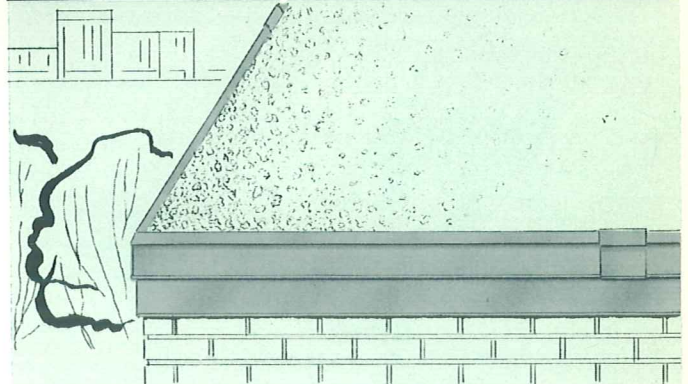
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RAILINGS

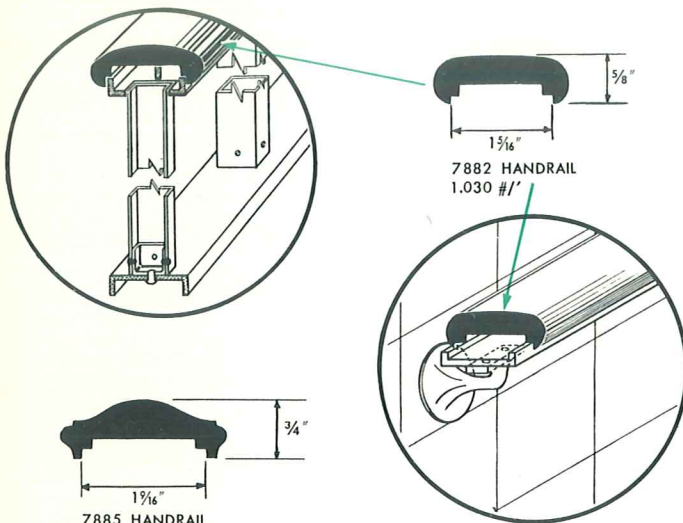


When a staircase is the point of focus, specify the rich, quiet tones of aluminum for railings, in stores, hotels and other commercial buildings. Aluminum blends well with all color schemes, and when properly finished, is practically maintenance free. Reynolds standard handrail and baluster sections permit a wide range of expression. And the flexibility of aluminum extrusions offers virtually unlimited design freedom on an economical basis.

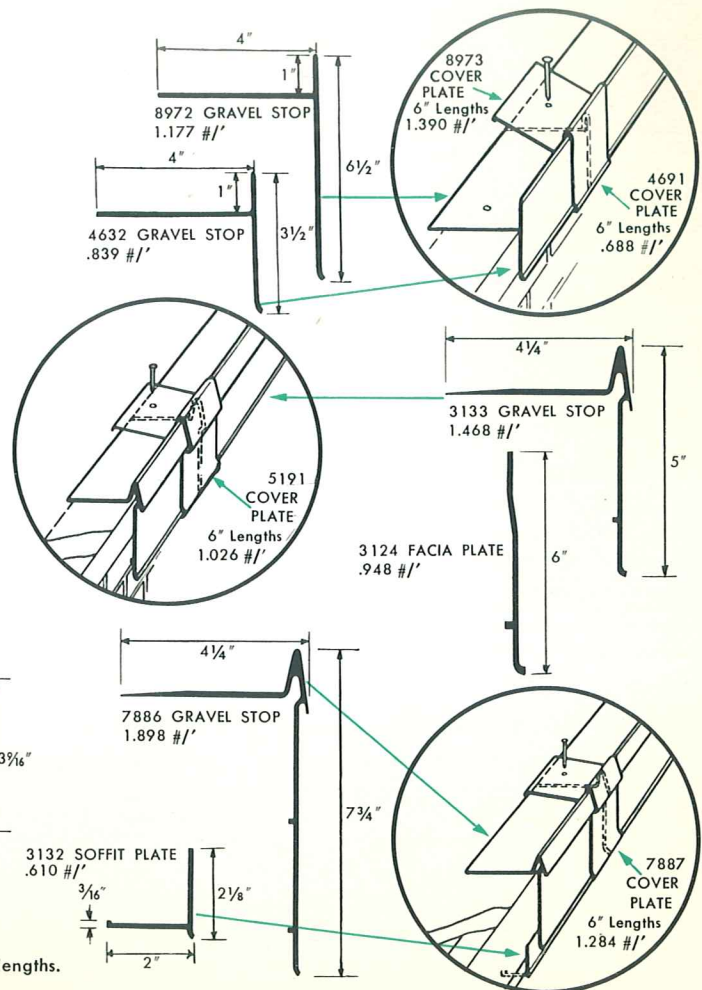
GRAVEL STOPS AND COPINGS



Aluminum copings, and gravel stops when used alone or in combination with soffits, serve a decorative as well as a functional purpose. Attractiveness, durability and freedom from destructive and staining rust are the chief advantages of aluminum in this application. The standard shapes available in Reynolds extruded aluminum will meet most needs. Special designs can be made inexpensively, even for relative small requirements.



Handrails are 63S-T5 aluminum. 20' lengths.
For Balusters see Tubing and Bar on pages 10 and 11.



Gravel Stops and Copings are 63S-T42 aluminum. 10' lengths.



REYNOLDS ALUMINUM

Reynolds supplies only the aluminum mill products for these applications. We will be pleased to send you the names of fabricators who can perform metal work to your specifications.

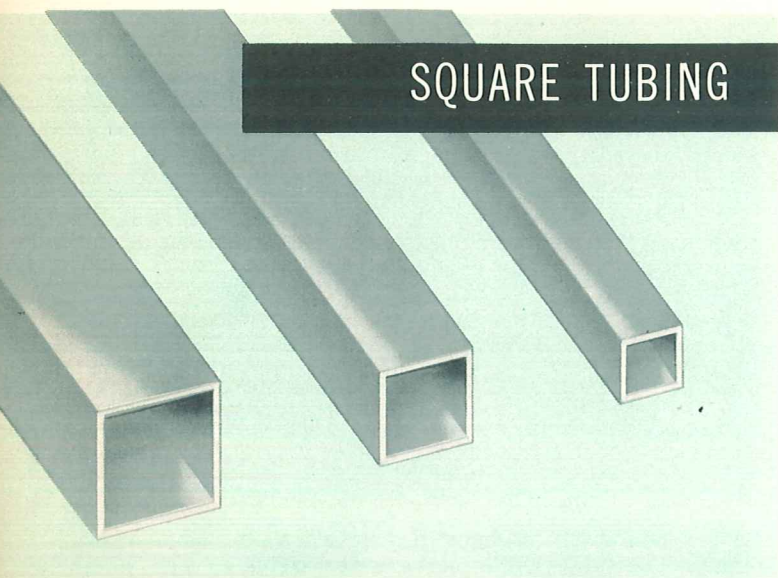


TABLE OF SIZES

Section No.	Size Inches	Approx. Wt. #/'
7896	1 x 1 x 1/8	.526
7897	1 1/2 x 1 1/2 x 1/8	.826
7898	2 x 2 x 1/8	1.126

Square Tubing is 63S-T5 aluminum, 21'1" lengths.

NOTE:

Tools for the production of Reynolds Architectural Aluminum Tubing, Bars and Shapes are carefully made to provide the extremely sharp corners so desirable in architectural designs. In fact, quality control for these items is far more stringent than for regular, high quality mill products.

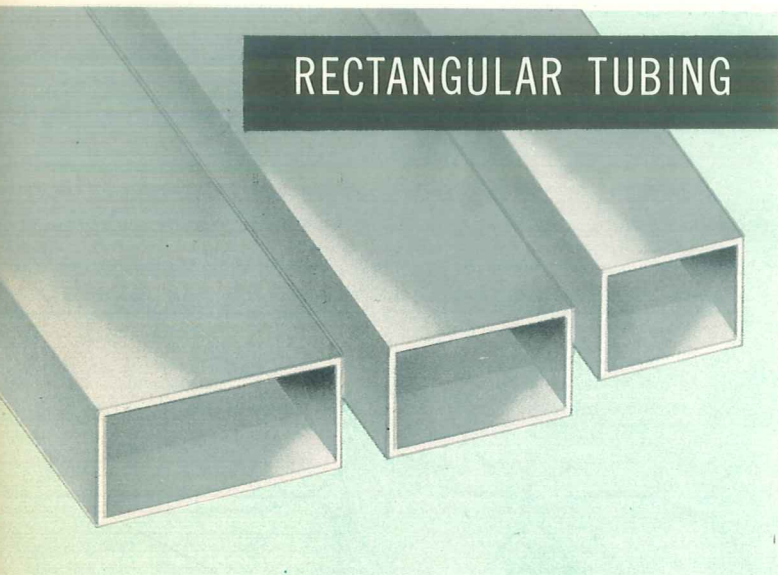


TABLE OF SIZES

Section No.	Size Inches	Approx. Wt. #/'
7899	1 3/4 x 2 1/4 x 1/8	1.126
7900	1 3/4 x 3 x 1/8	1.350
7901	1 3/4 x 4 x 1/8	1.650
7902	1 3/4 x 5 x 1/8	1.950
7903	2 x 3 x 1/8	1.426

Rectangular Tubing is 63S-T5 aluminum, 21'1" lengths.

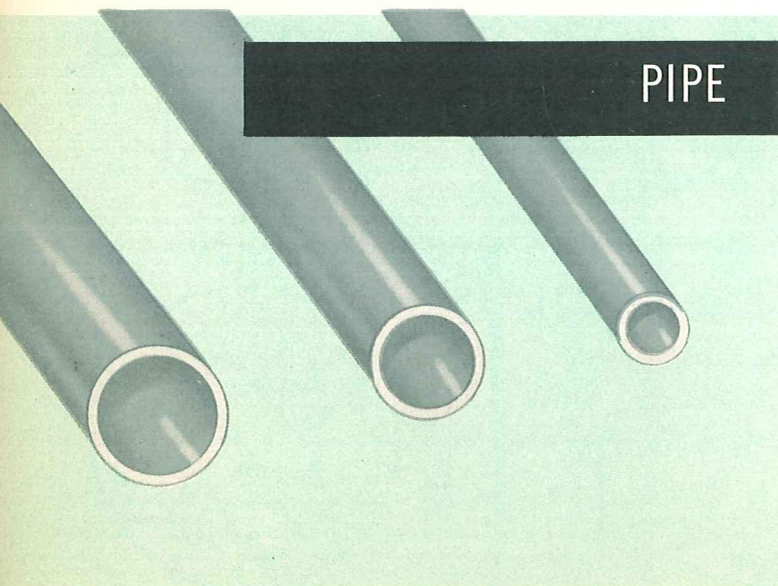


TABLE OF SIZES

Standard I.P.S.	Approx. Wt. #/'
1	.580
1 1/4	.785
1 1/2	.939
2	1.262

Pipe is 63S-T6 aluminum, 20' lengths.



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SQUARE BAR

TABLE OF SIZES

Section No.	Size Inches	Approx. Wt. #/'
1863	$\frac{1}{2} \times \frac{1}{2}$.300
1866	$\frac{3}{8} \times \frac{3}{8}$.468
1526	$\frac{3}{4} \times \frac{3}{4}$	.673
1906	1 x 1	1.200
2080	$1\frac{1}{4} \times 1\frac{1}{4}$	1.875
2079	$1\frac{1}{2} \times 1\frac{1}{2}$	2.700

Square Bar is 63S-T5 aluminum. 16' lengths.

RECTANGULAR BAR

TABLE OF SIZES

Section No.	Size Inches	Approx. Wt. #/'	Section No.	Size Inches	Approx. Wt. #/'
535	$\frac{1}{8} \times \frac{1}{2}$	.076	548	$\frac{3}{8} \times \frac{1}{2}$	.225
4011	$\frac{1}{8} \times \frac{5}{8}$	.094	549	$\frac{3}{8} \times \frac{5}{8}$	.278
780	$\frac{1}{8} \times \frac{3}{4}$	.112	793	$\frac{3}{8} \times \frac{3}{4}$	.338
536	$\frac{1}{8} \times 1$	.150	1497	$\frac{3}{8} \times 1$	.450
537	$\frac{1}{8} \times 1\frac{1}{4}$	.182	1427	$\frac{3}{8} \times 1\frac{1}{4}$	.561
538	$\frac{1}{8} \times 1\frac{1}{2}$	.224	1694	$\frac{3}{8} \times 1\frac{1}{2}$	.676
539	$\frac{1}{8} \times 1\frac{3}{4}$	.263	2066	$\frac{3}{8} \times 2$	.900
540	$\frac{1}{8} \times 2$	.300	1755	$\frac{3}{8} \times 3$	1.350
541	$\frac{3}{16} \times \frac{1}{2}$	.113	1536	$\frac{1}{2} \times \frac{3}{4}$	.449
542	$\frac{3}{16} \times \frac{3}{4}$	.169	1469	$\frac{1}{2} \times 1$	.600
543	$\frac{3}{16} \times 1$	.228	1684	$\frac{1}{2} \times 1\frac{1}{4}$	.750
544	$\frac{3}{16} \times 1\frac{1}{4}$	.281	1696	$\frac{1}{2} \times 1\frac{1}{2}$	.882
545	$\frac{3}{16} \times 1\frac{1}{2}$	.337	2053	$\frac{1}{2} \times 2$	1.200
547	$\frac{3}{16} \times 2$	.450	1769	$\frac{1}{2} \times 2\frac{1}{2}$	1.515
1772	$\frac{3}{16} \times 2\frac{1}{2}$	.563	1437	$\frac{1}{2} \times 3$	1.800
925	$\frac{1}{4} \times \frac{1}{2}$	.147	1501	$\frac{3}{4} \times 1\frac{1}{2}$	1.320
792	$\frac{1}{4} \times \frac{5}{8}$	.188	2052	$\frac{3}{4} \times 2$	1.764
3629	$\frac{1}{4} \times \frac{3}{4}$	.226	1733	1 x 1 $\frac{1}{2}$	1.818
1495	$\frac{1}{4} \times 1$	.300	2038	1 x 2	2.400
1403	$\frac{1}{4} \times 1\frac{1}{4}$	.376	Rectangular Bar is 63S-T5 aluminum. 16' lengths.		
2205	$\frac{1}{4} \times 1\frac{1}{2}$	.450			
2008	$\frac{1}{4} \times 1\frac{3}{4}$	.526			
2062	$\frac{1}{4} \times 2$	.582			
1773	$\frac{1}{4} \times 2\frac{1}{2}$	.750			
1754	$\frac{1}{4} \times 3$	.900			

ROD

TABLE OF SIZES

Section No.	Size Inches	Approx. Wt. #/'
7	$\frac{1}{2}$.235
11	$\frac{3}{4}$.529
15	1	.942

Rod is 63S-T5 aluminum. 16' lengths.



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SHAPES

SQUARE CORNER SHAPES

Shape	Section No.	Size Inches	Approx. Wt. #/'
EQUAL ANGLES	370	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{16}$.069
	563	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{8}$	.131
	7889	$\frac{3}{8} \times \frac{3}{8} \times \frac{1}{8}$	.169
	965	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{16}$	.109
	7932	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{8}$	.206
	371	$1 \times 1 \times \frac{1}{16}$	.144
	3562	$1 \times 1 \times \frac{1}{8}$	.281
	2146	$1 \times 1 \times \frac{3}{16}$	.408
	1803	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{8}$	.355
	1802	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{16}$	.521
	4630	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{8}$	.431
	1804	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{16}$	.632
	1820	$1\frac{3}{4} \times 1\frac{3}{4} \times \frac{1}{8}$	.506
	2155	$2 \times 2 \times \frac{1}{8}$	.581
	2284	$2 \times 2 \times \frac{3}{16}$	.858
	1839	$2 \times 2 \times \frac{1}{4}$	1.124
UNEQUAL ANGLES	7890	$\frac{3}{4} \times \frac{3}{8} \times \frac{3}{32}$	.116
	1846	$1 \times \frac{1}{2} \times \frac{3}{32}$	.161
	3563	$1 \times \frac{1}{2} \times \frac{1}{8}$	.206
	2280	$1 \times \frac{3}{4} \times \frac{1}{8}$	.244
	7891	$1\frac{1}{4} \times \frac{1}{2} \times \frac{1}{8}$	.244
	2149	$1\frac{1}{2} \times \frac{3}{4} \times \frac{1}{8}$	.319
	1806	$1\frac{1}{2} \times 1 \times \frac{1}{8}$	.356
	2143	$2 \times 1 \times \frac{1}{8}$	.431
	5497	$3\frac{1}{2} \times 1\frac{1}{4} \times \frac{1}{8}$	.694
CHANNELS	7892	$\frac{1}{2} \times \frac{3}{8} \times \frac{1}{8}$	.150
	4340	$\frac{1}{2} \times \frac{1}{2} \times \frac{3}{32}$	.148
	8974	$\frac{1}{2} \times \frac{3}{4} \times \frac{1}{8}$	.263
	8975	$\frac{5}{8} \times \frac{5}{8} \times \frac{1}{8}$	.244
	988	$\frac{3}{4} \times \frac{3}{8} \times \frac{1}{8}$	.187
	4339	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{8}$	.300
	1269	$1 \times \frac{1}{2} \times \frac{1}{8}^*$	.263
	5540	$1 \times 1 \times \frac{1}{8}$	.413
	3450	$1\frac{1}{4} \times \frac{1}{2} \times \frac{1}{8}^*$	.300
	8976	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{8}$	.526
	7893	$1\frac{7}{8} \times \frac{1}{2} \times \frac{3}{32}^*$	.254
	2156	$1\frac{1}{2} \times \frac{1}{2} \times \frac{1}{8}^*$	.337
	8977	$1\frac{3}{4} \times \frac{1}{2} \times \frac{1}{8}$	.374
	3930	$1\frac{3}{4} \times \frac{3}{4} \times \frac{1}{8}$	.450
	8978	$1\frac{3}{4} \times 1 \times \frac{1}{8}$	.526
	4391	$2 \times \frac{1}{2} \times \frac{1}{8}$	.413
	3507	$2 \times 1 \times \frac{1}{8}^*$	.563
	8979	$2\frac{1}{4} \times \frac{7}{8} \times \frac{1}{8}$	.563
	8980	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{8}^\dagger$	.787
	7894	$3 \times \frac{1}{2} \times \frac{1}{8}$	.563
	4393	$3 \times 1 \times \frac{1}{8}$	.713
	8981	$5 \times 2 \times \frac{3}{16}$	1.945
TEES	1358	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{8}$	.206
	8982	$\frac{3}{4} \times 1\frac{1}{4} \times \frac{1}{8}$	.281
	8983	$\frac{7}{8} \times 1\frac{1}{4} \times \frac{1}{8}$	.300
	8984	$1 \times \frac{1}{2} \times \frac{3}{8}$	.319
	8985	$1 \times \frac{3}{4} \times \frac{1}{8}$	.244
	1213	$1 \times 1 \times \frac{1}{8}$	.280
	7895	$1\frac{1}{4} \times \frac{7}{8} \times \frac{1}{8}$	.300
	8986	$2 \times \frac{3}{4} \times \frac{1}{8}$	.394

Shapes are 63S-T5 aluminum, 16' lengths except as indicated.
*20' lengths. † 22' length.

STRUCTURALS

STANDARD STRUCTURAL SHAPES

Shape	Section No.	Size Inches	Approx. Wt. #/'
EQUAL ANGLES	5640	$1 \times 1 \times \frac{3}{16}$	.408
	4613	$2 \times 2 \times \frac{3}{16}$	.868
	1822	$2 \times 2 \times \frac{1}{4}$	1.133
	4304	$2\frac{1}{2} \times 2\frac{1}{2} \times \frac{1}{4}$	1.433
	2695	$3 \times 3 \times \frac{1}{4}$	1.720
	1102	$3 \times 3 \times \frac{3}{8}$	2.526
	4607	$4 \times 4 \times \frac{1}{4}$	2.329
UNEQUAL ANGLES	5175	$4 \times 4 \times \frac{3}{8}$	3.436
	3661	$3 \times 2 \times \frac{1}{4}$	1.432
CHANNELS	5569	$4 \times 3 \times \frac{3}{8}$	2.986
	2645	$4 \times .180$	1.884
	2642	$5 \times .190$	2.364
	2600	$6 \times .225$	3.090

Structurals are 61S-T6 aluminum, 25' lengths.



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SHEET and PLATE

PLAIN

Alloy Temper	Gauge Inches	Size Inches	Alloy Temper	Gauge Inches	Size Inches
3S-H14	.020	36 x 96	3S-H14	.032	48 x 144
	.025			.040	
				.051	
	.025	36 x 120		.064	
	.032			.081	
	.040			.091	
	.051			.125	
		3S-F	.250	48 x 144	
			.375	36 x 96	

EMBOSSED

Pattern†	Gauge—Inches						
	.025	.032	.040	.064	.081	.102	.125
Stucco	*	*	*
Leather Grain	*	*	*
Wood Grain	*	*	*
Fluted	*	*	*	*	*

†Embossed two sides except Fluted is one side. One or two side embossing may be specified on special inquiry.

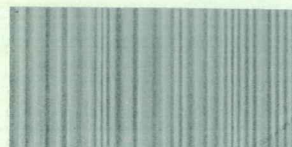
*48"x144", 3S aluminum with an H12 temper prior to embossing. Other patterns, sizes, alloys and tempers available on inquiry.



Stucco



Leather Grain



Wood Grain

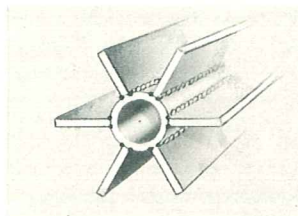
(Approximately 1/2 size)



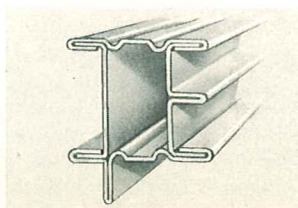
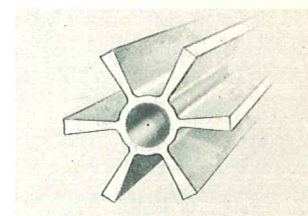
Fluted

EXTRUSIONS

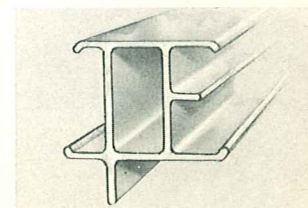
Architectural applications for aluminum extrusions are almost endless. One of their biggest virtues is that special shapes can be extruded economically because dies are not expensive and quantities need not be large. Distribution of metal to the greatest advantage for light weight, thickness and re-inforcement is another benefit. Two examples are shown below. Also see "Designing with Aluminum Extrusions"; one of the handbooks listed on page 15.



A welded assembly can often be combined into a single aluminum extrusion with improved accuracy and strength.



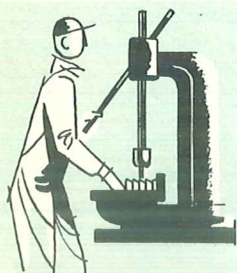
Roll-formed sections that require expensive roller dies may be replaced by a low-cost aluminum extrusion.



REYNOLDS ALUMINUM

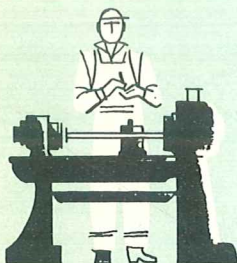
FABRICATION

Reynolds Aluminum alloys are produced in practically all mill forms. All of these basic forms are readily fabricated by standard metal working procedures. Complete information is available in Reynolds library of handbooks listed on the next page.



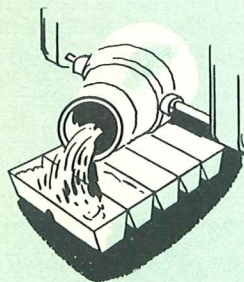
FORMING

One of the basic advantages of aluminum is that it is extremely easy to work. More liberal radii are usually required, however, than when forming steel. For complete information consult Reynolds technical handbook, "Aluminum Forming".



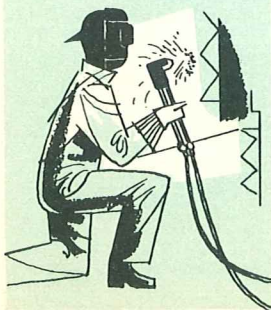
MACHINING

Both wrought and cast aluminum alloys may be machined readily. However, conventional practices are modified slightly for best results. For complete information consult Reynolds handbook, "Machining Aluminum Alloys".



CASTING

Aluminum can be cast by all the usual methods—sand mold, permanent and semi-permanent mold, plaster mold, die, etc. There is a variety of alloys available for each method, providing suitable characteristics for every end use.



WELDING

All types of welding can be used to join aluminum. Both gas and arc welding are suitable but for thicknesses under 0.040" the inert-gas-shielded method is recommended. For complete information consult Reynolds technical handbook, "Welding Aluminum Alloys".

FINISHES

These are only thumbnail outlines. For complete information get Reynolds 124 page handbook, "Finishes for Aluminum". See list of helpful literature on next page.

MECHANICAL*

Buffing—With abrasives of varying grits and textile wheels, discs or belts of corresponding texture, aluminum can be polished in a range from subdued sheens to mirror brightness.

Scratchbrushing—Rotating wire brushes with various degrees of fineness will produce smooth lined and satin aluminum finishes for special effects.

Sandblasting—Matte surfaces produced by blasting aluminum with silica sand, alundum, emery, etc., are fairly rough and should be protected by an oxide treatment or by painting.

Highlighting—A combination of finishes to get two-tone effects. Raised areas are masked off before depressed portions are etched, blasted, painted, etc. Then the raised surface is polished, buffed, scratch-brushed, painted, etc., to provide contrast.

Embossing—Uniform patterns and artistic designs may be impressed in aluminum sheet to enhance appearance, eliminate reflection, conceal wear. Several attractive patterns are standard mill sheets. Irregular patterns can also be achieved by typical hammer finishing.

CHEMICAL*

Etching—A frosty-white aluminum finish can be etched into the surface by a caustic bath. Or, by masking selected areas with asphaltum and controlled etching of free areas with acid, unusual designs can be developed. In either case, the rich, soft texture can be retained or used as a base for dyeing or painting.

Miscellaneous—Many chemical treatments are available to make aluminum more corrosion resistant or to provide paint and plating bases. Each has its merits and final choice is based on the work to be done, facilities at hand and economy in view of those two factors.

ELECTROLYTIC

Anodizing—Several variations of the anodic process are generally grouped under this one term. The basic purpose of each is to form a protective film over other finishes or to provide the base for the limitless range of dyed colors. Color anodizing is a too frequently overlooked medium for assuring interior harmony right in the basic design.

VITREOUS

Hard, abrasion and heat resistant finishes in various colors may be applied to aluminum surfaces by means of vitreous enamel frit. The basic operations include cleaning, an air-dried coat of ground enamel, followed by one or more coats of frit in water. The final step is a closely controlled baking operation.

ORGANIC

This type of finish is specified either for decorative reasons or for extra corrosion resistance. For decorative purposes a thoroughly clean, dry surface is sufficient to get a good bond. If added protection is desired, pre-treatment and the prime coat are determined by conditions to be encountered.

* For permanence mechanical and chemical finishes should be sealed against oxidation, corrosion or abrasion by a clear lacquer coating, an organic finish, or an anodic film.



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ALLOYS

Pure aluminum is soft and ductile and is alloyed to increase its strength and hardness. By heat treating processes and by cold working the metal, as rolling and stretching, the strength of the aluminum alloys is further increased. Architecturally, the following alloys are most commonly used:

SHEET:	General purpose and anodized finish	35
	Higher strength than 3S and anodized finish	525
	To match 63S	R305
TUBING:	Drawn, general purpose	35
	Extruded, general purpose	635
	Drawn, or extruded, for higher strength	615
EXTRUSIONS:	Shapes, bars, rods	635
	Shapes, for higher strength	615
CASTINGS:	Sand, general purpose	43
	Sand, for anodizing and matching 63S	214
	Sand, for higher strength than 43	356
STRUCTURAL:	Forgings and extruded shapes	145
	Rolled and extruded shapes	615
BOLTS & SCREWS:	For strength	245
RIVETS:	For anodizing	25
	For higher strength	615

HELPFUL LITERATURE



ARCHITECTURAL ALUMINUM FOLIO

A loose-leaf library of application and product information that Reynolds will keep up-to-date. Complete with engineering drawings for direct tracing.†

Aluminum Bridge Railing —a loose-leaf catalog of design data, drawings and details, similar to above†	
Aluminum Alloys & Mill Products Data	194 pages†
Aluminum Forming	152 pages†
Aluminum Structural Design	130 pages†
Designing with Aluminum Extrusions	138 pages†
Finishes for Aluminum	124 pages†
Heat Treating Aluminum Alloys	144 pages†
Machining Aluminum Alloys	124 pages†
Mechanical Fastening Methods for Aluminum	136 pages†
Welding Aluminum	186 pages†
A.B.C.'s of Aluminum	96 pages†
Metals Weight Calculator —Slide rule for determining weights of mill forms of all common metals.‡	

†Single copies free when requested on business letterhead, otherwise each book is one dollar.

‡Unless individually requested on business letterhead price is fifty cents.

MOVIES

All movies are 16mm, sound, color films.

The Shape of Things to Come—Aluminum extrusion design, production and application. Showing time, 26 minutes.

Tale of the Powdered Pig—Aluminum powders and pastes production and use. Showing time, 23 minutes.

Pigs and Progress—A non-technical explanation of aluminum production and applications. Showing time, 26 minutes.

Movies will be loaned free to anyone requesting them on business letterhead.

Write for a complete index of literature and movies.

REYNOLDS METALS COMPANY, 2500 S. Third St., Louisville 1, Ky.

SPECIFICATIONS

The suggested short form specification which follows is suitable for general use. For complete specifications, especially when new or unusual designs are involved, consult the Library of Reynolds Handbooks listed at left below. Each book is devoted to the comprehensive discussion of a single subject and covers every conceivable condition of application. A Reynolds Architect Service Representative will gladly assist you in drawing up long form specifications.

SHORT FORM

GENERAL CONDITIONS—The "General Conditions of the contract for the Construction of Buildings", Standard Form of the American Institute of Architects, latest edition, are hereby made a part of this specification.

SCOPE OF WORK—The contractor shall furnish all labor and materials to complete all (fill in name, e.g., aluminum threshold) work indicated on the drawings or specified herein or both as follows: (state type, e.g., Reynolds Aluminum type III threshold No. 3704). Fastenings or other material required for the proper installation of aluminum thresholds. Necessary caulking compounds. Shop and setting drawings.

MATERIALS—All aluminum (fill in name, e.g., thresholds) specified shall be of Reynolds Aluminum Alloy (specify, e.g., 63S-T5), and shall meet the properties and specifications of Reynolds Metals Company governing the alloy specified.

CONTACT WITH DISSIMILAR MATERIALS—All portions of steel or other dissimilar metal framing to be in contact with aluminum shall be adequately protected and painted. A recommended paint system is as follows:

A coat of rust-inhibitive primer made with a pigment such as red lead, blue lead or zinc chromate followed by one or preferably two coats of aluminum paint.

The use of copper in contact with aluminum should be avoided whenever possible. If such contact cannot be avoided, the surfaces in contact shall be protected with a suitable paint or the surfaces separated and the joints sealed by filling with aluminum mastic caulking compound. Conditions allowing drainage of copper compounds onto bare aluminum shall not be accepted.

All green wood in contact with aluminum, or wood which might become water-soaked, shall receive two coats of aluminum paint.

All aluminum surfaces in contact with masonry shall be painted with a heavy coat of bituminous paint.

This contractor, before starting any work shall verify governing dimensions at the building and examine all adjoining work on which this work is in any way dependent for its acceptable installation according to the intent of this specification. He shall prepare and submit shop drawings, outlining in detail the various sections of the work, the kind of material, the size of members, the method of securing same together and to the work of the other trades.

Fabrication and construction shall be in strict accordance with recommended standards of Reynolds Metals Company.



REYNOLDS METALS COMPANY



REYNOLDS METALS COMPANY

GENERAL SALES OFFICE

2500 So. Third St. • Louisville 1, Ky.

B2-12-1053

Litho in U.S.A.

OTHER ALUMINUM BUILDING MATERIALS—

Gutters and Downspouts, Nails, Reflective Insulation, Roofing and Siding, Windows.

For information and literature write to:

Reynolds Metals Company, Building Products Division,
2000 S. Ninth St., Louisville 1, Ky.

BRANCH OFFICES

ALABAMA • Birmingham 3
1120 Brown-Marx Bldg. (4-6884)

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920 Ingraham Bldg. (9-2792)

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1212 Fisher Bldg. (TR 1-8800)

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